

Agency: Commerce, Community and Economic Development**Grants to Municipalities (AS 37.05.315)****Grant Recipient: Sitka****Project Title:****Project Type:** Remodel, Reconstruction and Upgrades

Sitka - Swan Lake Recovery and Improvements

State Funding Requested: \$1,650,000
One-Time Need**House District: 2 / A****Brief Project Description:**

Funding for comprehensive dredging project and area rehabilitation work at Swan Lake in Sitka.

Funding Plan:**Total Cost of Project: \$4,000,000**

	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
Federal Funds	\$774,900	10				
Local Funds					\$1,575,100	11
Total	\$774,900				\$1,575,100	

Detailed Project Description and Justification:

Swan Lake, 'Sitka's Central Park', is a eutrophic dying lake. The CBS has been working to improve water quality and recreational opportunities surrounding the lake for many years. Dredging Swan Lake is necessary to retain Swan Lake as an integral part of Sitka's future. In the spring and summer parents and children fish and boat on the lake; in the winter Swan Lake is the only location in town for ice skating.

Swan Lake is not only special to Sitka residents and visitors. It has a very special place in Alaska history. It was created in 1851 when the Russian occupants of New Archangel connected and deepened a series of ponds by dredging, rerouting a creek and building a log dam at the outlet. The newly formed lake was created so that ice could be harvested for shipment to California. This was a successful business venture for the Russian occupants which received special attention during the purchase of Alaska by the United States.

An active multi-year water body recovery project began in the late 1990's. The guide for these efforts has been the Swan Lake Watershed Recovery Strategy and Total Maximum Daily Load Report, which was completed during 2000. In 1981 Swan Lake was named an Area Meriting Special Attention under the Coastal Management Program. This included water quality and watershed protection policies which have continued to evolve. In 1985, to respond to citizen concerns about the eutrophication of the lake, the CBS commissioned the Swan Lake Recreational Improvements Geotechnical Assessment and Construction Analysis. This study reported depth and bottom substrate measurements throughout the lake and recommended dredging the majority of the lake to increase overall depth. The lake averages less than seven feet in depth. CBS has actively sought funds for dredging ever since.

There have been three strategic dredging projects in Swan Lake since 2001, funded by a combination of Coastal Impact Assistance Program (CIAP), DEC/EPA 319 grants and municipal matching funds (totaling approximately \$450,000). These

small projects have been successful at improving water flow in and out of the lake, increasing access for recreational activities and improving winter fish habitat. These projects were very popular with the Sitka residents. Small dredging projects, however, are not cost effective. Mobilization costs are high for projects such as this; for our small projects mobilization/demobilization consumed up to 35 percent of the project budget. Larger projects are much more cost effective because the mobilization costs are nearly fixed and not proportional to the volume of material dredged.

With the availability of state designated Coastal Impact Assistance Program funds (CIAP) of \$774,988 designated to CBS which will meet all grant requirements and permit continuing rehabilitation of Swan Lake, CBS will be able to mount a more strategic project. Sitka requests \$1,650,000 State funds to partner with CBS to complete a major long-term recovery of Swan Lake. Once completed, Swan Lake will provide its historical, environmental and recreational richness to all well into the foreseeable future.

Project Timeline:

FY 2011-12.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

City and Borough of Sitka

Grant Recipient Contact Information:

Name: Marlene Campbell - City & Borough of Sitka
Address: 100 Lincoln St.
Sitka, AK 99835
Phone Number: (907)747-1855
Email: campbell@cityofsitka.com

Has this project been through a public review process at the local level and is it a community priority? ☒ Yes ☐ No

FY2011 CBS LEGISLATIVE CAPITAL PROJECT REQUEST

Project Title: SITKA SWAN LAKE RECOVERY AND IMPROVEMENTS

Total Project Cost:	\$ 4,000,000 (100%)
Funding already secured: (CIAP Legislative Grant):	\$ 774,900 (20%)
FY2011 State Funding Request:	\$ 1,650,000 (41%)
Additional Funding Required:	\$ 1,575,100 (39%)
City and Borough of Sitka Federal Tax ID Number: 92-0041163	

Swan Lake, 'Sitka's Central Park', is a eutrophic dying lake. For decades, CBS has been improving Swan Lake's water quality and recreational opportunities. Dredging Swan Lake is not "just a nice thing to do" but is necessary to retain Swan Lake as an integral part of Sitka's past and future. Swan Lake is a park used year-round. In the spring and summer, parents and children fish and boat on the lake; in summer, cruise ship visitors visit the lake to recreate, hike and learn about its history; in the winter, Swan Lake is the only location in town for ice skating.

Swan Lake is not only special to Sitka residents and visitors. It has a very special place in Alaska history. It was created in 1851 when the Russian occupants of New Archangel connected and deepened a series of ponds by dredging, rerouting a creek and building a log dam at the outlet. The newly formed lake was created so that ice could be harvested for shipment to California. This was a successful business venture for the Russian occupants which received special attention during the purchase of Alaska by the United States.

An active multi-year water body recovery project began in the 1990's. The guide for these efforts has been the Swan Lake Watershed Recovery Strategy and Total Maximum Daily Load Report, which was completed during 2000. In 1981 Swan Lake was named an Area Meriting Special Attention (AMSA) under the Coastal Management Program. This included water quality and watershed protection policies. In 1985, to respond to citizen concerns about the eutrophication of the lake, the CBS commissioned the Swan Lake Recreational Improvements Geotechnical Assessment and Construction Analysis. This study recorded depth and bottom substrate measurements throughout the lake, which averages less than seven feet in depth, and recommended dredging the majority of the lake to increase overall depth.

Three small strategic dredging projects with broad public support have been completed in Swan Lake since 2001, funded by a combination of Coastal Impact Assistance Program (CIAP), DEC/EPA 319 grants and municipal matching funds (totaling approximately \$450,000). These projects were successful in improving water flow in and out of the lake, increasing access for recreational activities and improving winter fish habitat. Small dredging projects, however, are not cost effective. Mobilization costs are high and consumed up to 35 percent of the project budgets. Larger projects are much more cost effective because the mobilization costs are nearly fixed and not proportional to the volume of material dredged. The 2009 Legislature provided Visitor Excise Tax funding for this upgrade project, but the funds were vetoed. **CBS again requests \$1,650,000 in state funds to complete this major improvement.**

With the availability of state designated Coastal Impact Assistance Program funds (CIAP) of \$774,988 designated to CBS which will meet all grant requirements and permit continuing rehabilitation of Swan Lake, CBS will be able to mount a more strategic project. Sitka requests \$1,650,000 State funds to partner with CBS to complete a major long-term recovery of Swan Lake. Once completed, Swan Lake will provide its historical, environmental and recreational richness to all well into the foreseeable future.

CITY AND BOROUGH OF SITKA

RESOLUTION 2009-52

**A RESOLUTION BY THE CITY AND BOROUGH OF SITKA (CBS)
SUBMITTING CBS 2011 STATE LEGISLATIVE PRIORITIES
TO STATE OF ALASKA AND 2010 LEGISLATURE**

WHEREAS, the City and Borough of Sitka has long supported cooperative efforts and resources with the State of Alaska to maximize public services for the citizens of the State of Alaska in the most efficient, cost effective manner; and

WHEREAS, the State of Alaska has reduced its cooperative resources and efforts, resulting in not adequately maintaining State owned facilities and passing unfunded mandates on to municipalities; and

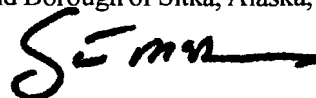
WHEREAS, the City and Borough of Sitka and other municipalities have suffered major budget impacts from State management of the PERS/TRS system, State harbors, State roads and utilities, and other State responsibilities which should be compensated;

NOW, THEREFORE, BE IT RESOLVED that the Assembly of the City and Borough of Sitka, Alaska, adopts the following FY2011 State Legislative Priorities and urges the Alaska State Legislature to support them to the maximum extent possible:

- **State Revenue Sharing/Community Dividend/Local Tax Relief** - The City and Borough of Sitka supports State Revenue Sharing provided on a sustainable basis drawn from proposals such as the Community Dividend or similar means of equitably compensating Alaska communities for providing local services.
- **Education** - State funding should be increased to cover escalating transportation expenses, inflation, the rising costs of fuel and energy, and reasonable new costs to improve the quality of education.
- **Local Control and Maximum Local Self-Government Guaranteed by the Alaska Constitution**- The Legislature should defeat any legislation that creates new unfunded mandates or takes away existing powers of local governments. The State should fund existing unfunded State mandates.
- **Public Transit and Community Transportation** – The City and Borough of Sitka supports the creation by the State of a forward funded statewide Transit Trust Fund, with the income from the Fund used to find or match Federal funding for local public transit.
- **Deferred Maintenance of Harbors** – The State should fully fund the deferred maintenance of State harbors being transferred to local governments. In addition, the state should fully fund the harbor 50 percent matching funds program legislated by SB 291, the Municipal Harbor Facility Grant Fund, to assist with future harbor upgrades.

NOW FURTHER BE IT RESOLVED that the Assembly submits the enclosed FY2011 City and Borough of Sitka Legislative Priorities, CBS Legislative Capital Project Requests and CBS Requests for State Funding for State Facilities in priority order to the 2010 Session of the Alaska State Legislature and State of Alaska.

PASSED, APPROVED, AND ADOPTED by the Assembly of the City and Borough of Sitka, Alaska, on this 22th day of December, 2009.



Scott McAdams, Mayor

ATTEST:



Sara Peterson, Acting Municipal Clerk



Section 319

NONPOINT SOURCE PROGRAM SUCCESS STORY

Alaska

Community Watershed Cleanups, Stormwater Controls, and Lake Dredging Improve Water Quality and Recreation Uses

Waterbody Improved

Swan Lake is Sitka, Alaska's "Central Park," widely used for recreational uses, providing habitat for waterfowl, ice skating in winter and historical uses going back to its Russian ownership. Years of residential growth and activity along Swan Lake and its main tributary, Wrinklneck Creek, have resulted in the accumulation of debris, solid waste, metals and plastics. Wrinklneck Creek and the north end of Swan Lake were impaired from those pollutants and listed together on Alaska's 1994, 1996 and 1998 impaired waterbody lists. Alaska's Department of Environmental Conservation (ADEC) used Clean Water Act section 319 grants over five years to fund community trash cleanups, manual harvest of noxious aquatic plants, lake dredging, water quality monitoring, educational efforts, stormwater mapping, and operations and maintenance schedules. These collaborative efforts improved water quality and resulted in Alaska removing from its 303(d) list both Wrinklneck Creek and Swan Lake for debris and solid waste in 2004.

Problem

The Swan Lake watershed is near the downtown area of Sitka, which is on the west coast of Baranof Island fronting Sitka Sound. Baranof Island is an outer-coast island in the north-west area of southeast Alaska's Alexander Archipelago bordering the Gulf of Alaska and Pacific Ocean. The watershed is relatively small, encompassing less than five square miles. The watershed drains to the shallow, 23-acre Swan Lake through two small streams, Wrinklneck Creek and Arrowhead Creek.

ADEC and the CBS conducted three assessments in order to eliminate other anecdotal water quality concerns and confirm that solid waste/debris was a major source of impairment. The pollutants were more fully described in the 1996 list as "wood, oil tanks, waste metals and plastics." The state standard for residue and debris prohibits any deposits on streambeds, shorelines or lakes that negatively impact designated uses. Water quality

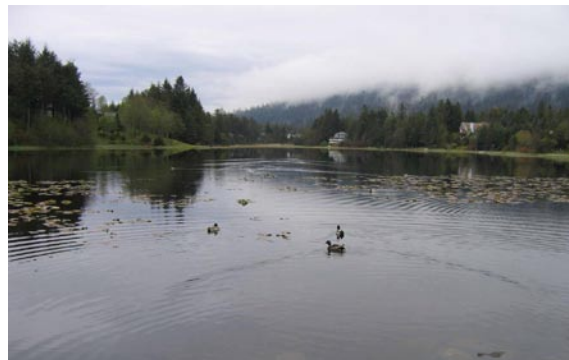


Figure 1. Ducks enjoy the cleaner water as a result of removal of trash and debris.

field investigations pointed to the need for a thorough cleanup of debris accumulations and future actions to keep the watershed clean. The effects of debris/solid waste residues on uses of Wrinklneck Creek and Swan Lake are (1) negative impacts on recreational uses within the watershed; (2) creating nuisance conditions that could attract undesirable

wildlife; and (3) potential adverse effects on resident fish habitat and their populations.

Project Highlights

CBS, its contractor, and ADEC developed an EPA-approved Swan Lake Watershed Recovery Strategy and Total Maximum Daily Load (TMDL) during 2000.

Restoration activities in the watershed include annual community trash cleanups (Figure 2), manual harvesting of lily pads in high-use recreational areas, dredging the lake outlet channel and the Wrinklneck Creek delta, monitoring by citizens and professionals, improving hydraulic efficiency of culverts in the Arrowhead Creek/Monastery Street intersection, and completing a stormwater control strategy and a "state of the lake report" for public education. Some activities were one-time tasks; other tasks are continuing.



Figure 2. The CBS team shows off a load of trash collected during a Swan Lake cleanup.

The Swan Lake watershed restoration project continues to apply a broad number of best management practices for water quality protection. Particular emphasis is placed on stormwater collection and treatment, ranging from storm drain stenciling to greater use of vegetative swales to treat road runoff. Several tons of trash and debris have been removed from the

creek and lake over the years. During the first cleanup in 2000, volunteers collected more than 6,600 pounds of trash and debris. In 2001 volunteers collected another 1,000 pounds, including 12 metal gas cans and two large storage tanks. Each year the amount collected has decreased from the previous year.

Results

Citizen involvement continues for the ninth consecutive Swan Lake Trash Cleanup scheduled for April 2008. This cleanup will continue to be an annual event in coordination with a citywide spring cleanup.

CBS believes the actions to date support moving the Swan Lake watershed to Category 2 in the 303(d) assessment report, which represents a waterbody that meets some designated uses but for which data is still needed to determine whether it meets all designated uses. The Swan Lake watershed team has an implemented waterbody recovery plan and an approved TMDL, which includes the annual cleanups and monitoring.

CBS has provided the documentation confirming that the TMDL continues to be implemented and that water quality standards are being met. As a result, Alaska removed Wrinklneck Creek and Swan Lake from its 2004 303(d) list of impaired waters. The success of these efforts reflects the community's commitment and the implementation of the Swan Lake Watershed Recovery Strategy.

Partners and Funding

CBS has received a total of \$181,830 in section 319 funds from ADEC for Swan Lake and Wrinklneck Creek recovery actions. CBS has provided approximately \$121,220 in matching funds for these projects.



U.S. Environmental Protection Agency
Office of Water
Washington, DC

EPA 841-F-08-001C
April 2008

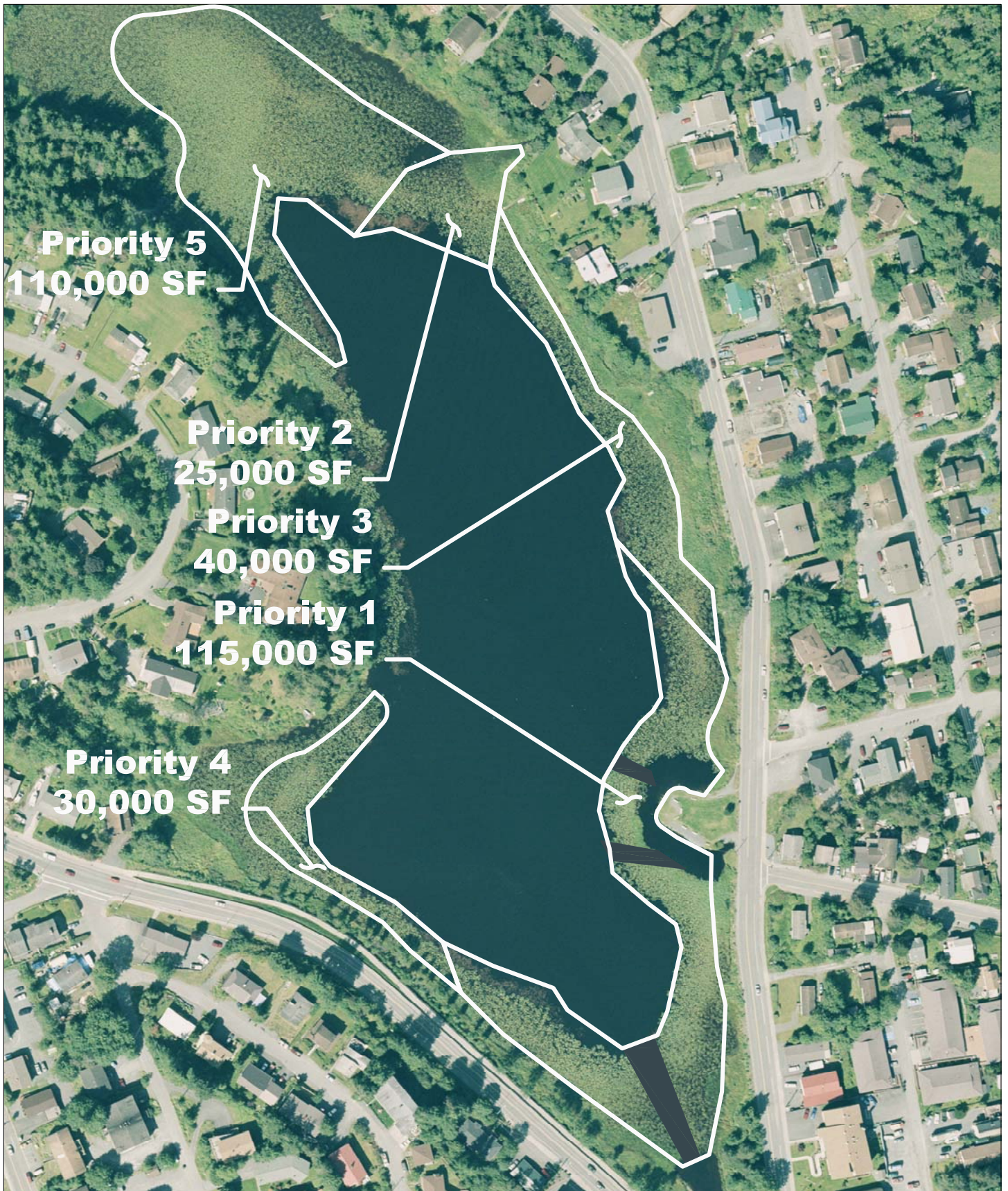
For additional information contact:

Mark Buggins, Environmental Superintendent
City and Borough of Sitka
907-966-2256 • markb@cityofsitka.com

Laura Eldred, Environmental Program Specialist
Alaska DEC Division of Water
907-376-1855 • laura.eldred@alaska.gov







City and Borough of Sitka

DEPARTMENT OF PUBLIC WORKS

100 LINCOLN STREET • SITKA, ALASKA 99835

TEL (907) 747-1804 FAX (907) 747-3158

Swan Lake Dredging Area Map

DRAWN:	TAD	SCALE:	1"=200'
CHECKED:	MBuggins	DATE:	June 2009
DRAWING NAME	SwanDredge04-09		
SHEET NO.	1 / 1		

City of Sitka, Alaska Swan Lake Restoration Project Location Map



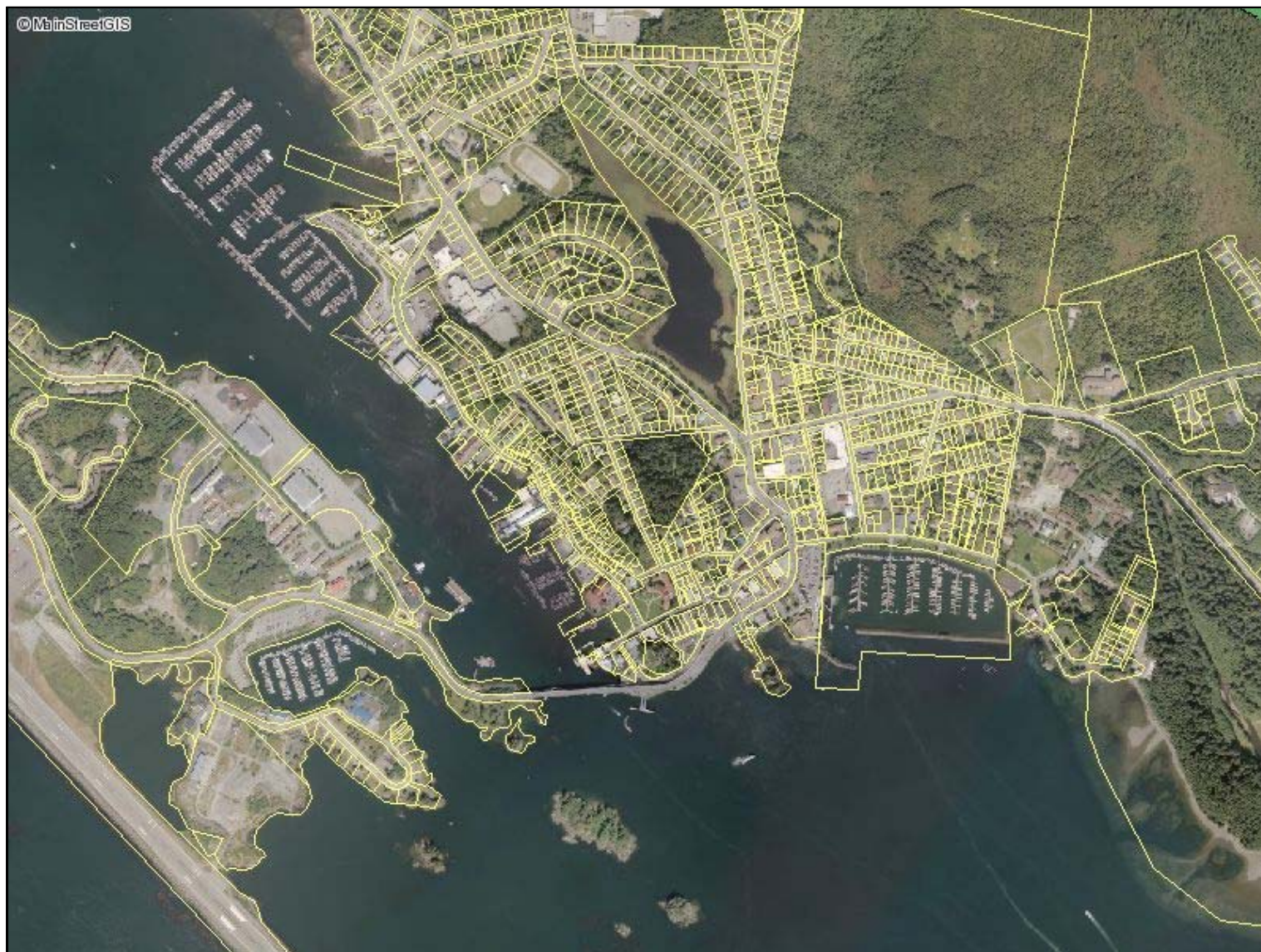
- A Address No.
- A Parcel ID
- 2007 Comp. Plan
- A Tract Ownerships
- Zoning
- Streets
- Parcels
- Parcels - Sitka
- Sound
- Nautical Charts



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1 in = 1160.87 ft



1 : 13930.44

Data Currency: Property Records 12/5/2008 GIS Parcel Lines 11/1/2008

0 480 960 ft

SITKA SENTINEL

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Sitka, Alaska

Monday, April 19, 2010

8 Pages



Spring Cleaning

Volunteers Marcel and Connie LaPerriere pick up trash along Swan Lake Saturday during the annual Swan Lake clean-up. Sitkans were busy picking up litter around town and around their properties dur-

ing the first weekend of the city's Spring Clean-Up 2010. All residential property owners may dispose of refuse at the Jarvis Street Transfer Station free of charge through Sunday, April 25. (Sentinel Photo)

Sitkans take care of Swan Lake, Sitka's "Central Park".

This year marks the 10th year of the annual Swan Lake

community clean-up. Swan Lake is a very popular

recreational site for the community. As well as

indicating community support for maintaining Swan Lake

as a local asset this photo is indicative of the

eutrophication plaguing the lake. The foreground shows

sedge grass intruding into the lake along shore, yellow

lilies and bog bean coming to the surface. In the center

of the photo is sedge grass "island" isolated from the

spit by previous small dredging projects that deepened

the water around the spit to provide fishing and boating

opportunities. Much larger dredging projects are needed

to improve water quality, fight off the eutrophication

and filling in of the lake to maintain the health of this

valuable community resource.